ENGINEERING NEWS-RECORD

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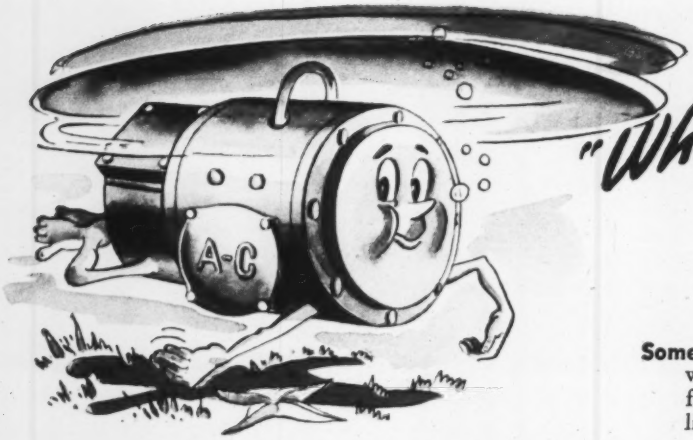


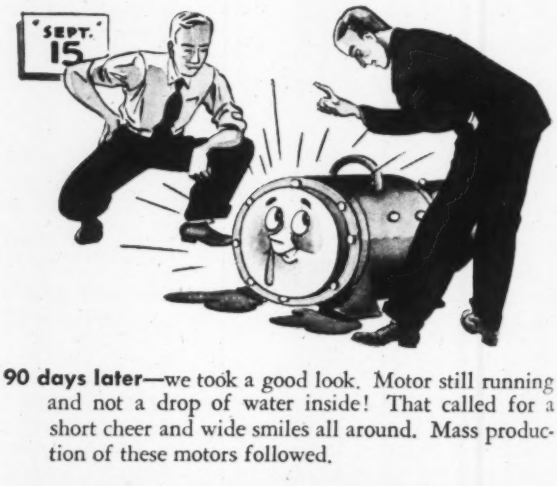
"What! Build a Motor to Run Underwater for 90 Days?"

Some said "Impossible!" But the Navy insisted, "We want a motor that likes water so well it'll run in 25 feet of it for 90 days. What's more—it's got to be lighter, more compact than standard motors."

No diving suits allowed! Biggest problem was waterproof, pressure-proof casings. Cast-iron wouldn't do — too porous. So we turned to fabricated steel — tough, durable — and lightweight too!

Then we found that fabricated parts could be successfully welded together to assure water-tightness. For proper magnetic characteristics, we decided to use field yokes of one-inch rolled steel.

Things look better! We reinforced end-housings, double-checked insulation, made sure exposed parts were leak-proof. Nothing left to do but put our baby in the test-tank, check it regularly, and hold our breath.



90 days later—we took a good look. Motor still running and not a drop of water inside! That called for a short cheer and wide smiles all around. Mass production of these motors followed.

There's a Moral: Every time Allis-Chalmers engineering solves *special* motor problems, we discover new ways to build better standard motors for you. ALLIS-CHALMERS, MILWAUKEE 1, WIS.

A 1927

Wait 'til you see the NEW

ALLIS-CHALMERS MOTORS!

HEAR THE BOSTON "POPS": *Every Saturday Evening, American Broadcasting Co.*

News of the Week

ENGINEERING NEWS-RECORD • MAY 9, 1946 • VOLUME 136 • NUMBER 19

Building material shortage will continue, CPA reports

Although monthly survey reveals "considerable" production increase, demand continues to outrun supply—Builders respond to housing program's demands

Adjustments of wages and prices within the construction industry and the materials supply field are only a partial answer to continuing shortages of housing and materials, the monthly report of the Civilian Production Administration said last week.

"It may be well to realize," the report said, "that in spite of the most favorable progress we may make in the production of building materials, shortages are bound to persist. The pent up demand for these materials is so great that for a long time to come building materials will be swallowed up as fast as they are produced—and users all over the country will cry for more."

Some progress made

Reviewing the current materials situation, the CPA report said that the current shortage reports mask to some extent the "considerable" progress made in recent months. As shown by the accompanying table, CPA reported that in the cases of brick and cast iron soil pipe the increases have been "phenomenal." It credited the achievement to three factors —Efforts of producers themselves, assistance provided by the OPA and CPA, and the assistance of the U. S. Employment Service in recruitment of labor.

Prime evidence of the continuing demand for materials, however, was given in a partial list of some 200 firms which have already announced plans for expanding their facilities for production.

The most serious shortage at present, CPA said, is in pig and scrap iron, and sheet steel for the production of soil pipe, warm air furnaces, radiation and plumbing fixtures. Also listed as raw materials in short supply were: paper liner for gypsum board, crating lumber and dry felt for asphalt roofing.

"Plant and equipment are further limiting factors," the report continued. "To eliminate equipment bottlenecks, CPA is making special provision for extension of priorities assistance to producers of critical building materials for the equipment they require, and to grant similar assistance to producers of such equipment."

Housing program response

The residential construction industry's response to the federal housing program has been "tremendous" the report said. From January 15 to April 12, more than 235,000 sale units and about 75,000 rental units were authorized by FHA, and HH priorities were granted to applicants for the necessary critical materials.

Prefabrication application

As to prefabricated housing units, CPA reported that as of April 17, 256 applications had been received from prefabricators seeking priority assistance in obtaining critical materials. Of these, 183 applications, covering 77,854 houses to be manufactured during the second quarter of the year, have been processed, and authorizations issued for about 25 percent of the materials requested.

"A recent survey of the industry has clearly shown," the report concludes "that houses designed and manufactured by bona fide prefabricators are good homes, well conceived and constructed. When mass production is obtained, (prefabrication) will prove a tremendous adjunct to the housing program.

Probable construction volume

Preliminary estimates of the CPA indicate that new residential construction will be about $3.9 billion in 1946 and $6.6 billion in 1947. Non-residential construction of all types should run close to $5 billion in 1946 and maintenance and repair may exceed $5 billion if materials are available to support construction at these levels.

The high level of new non-residential construction, despite the restrictions of Veterans' Housing Order No. 1 of March 26, the CPA states, is due to the large amount of work under way when that order was issued and to the large volume of work such as highways, sewers, etc., not affected by that order.

PRODUCTION AND REQUIREMENTS OF MAJOR CRITICAL BUILDING MATERIALS

Material and Unit	Mo. Av. 1941	Production 1946 Jan.	Feb.	Mar.	Est. Prod. Mo. Av. 1946	Production Requirements Mo. Av. 1946	1946 Deficit
Lumber (Mil. Bd. Ft.)	3,045	1,902	2,081	2,250[a]	2,500	3,058	−18.2%
Softwood Plywood (Mil. Sq. Ft.)	140	107	98	101[a]	125	177	−29.9
Common & Face Brick (Million)	412	272	281	334[a]	375	480	−21.9
Structural Clay Tile (000 Tons)	94	70	68	78[a]	95	114	−16.7
Clay Sewer Pipe (000 Tons)	n. a.	84	55[a]	62[a]	90	100	−10.0
Cast Iron Soil Pipe (000 Tons)	47	28	26	28	37	54	−31.5
Gypsum Board (Mil. Sq. Ft.)	231	216	207	n. a.	231	338	−31.7
Other Building Bd. (Mil. Sq. Ft.)	187[a]	217[a]	216[a]	n. a.	242	303	−20.1
Asphalt Roofing (Mil. Square)	4.8[a]	5.8	5.1	n. a.	5.3	6.0	−11.7
Cast Iron Radiation (000 Sq. Ft.)	7,000	1,931	1,952	2,353	3,250	5,833[c]	−44.3
Warm Air Furnaces (000 Units)	47.3	37.7	38[a]	38[a]	50	66	−24.2
Bathtubs (000 Units)	98	——	205[a]	——	90	113	−20.4
Sinks (000 Units)	120[b]	——	310[a]	——	117	194	−39.7
Lavatories (000 Units)	172	——	400[a]	——	139	176	−21.0
Water Closets (000 Units)	203	——	490[a]	——	167	185	−9.7

[a] Estimated. n. a. not available.
[b] Excludes sink and tray combinations.
[c] This may be reduced if convector radiation production expands.

NEWS IN BRIEF

In telegraphic form, here are latest news developments on the engineering and construction front during the week.

Construction—A 200-bed addition is to be made at the *Orange County, Fla.*, hospital. . . . Construction in *Minnesota* in March was almost nine times greater than in the corresponding month of last year. . . . Radio Corp. of America has bought its *Lancaster, Pa.*, plant from the Navy for about $4,500,000 and will spend $2,000,000 more for plants and equipment. . . . E. I. Du Pont de Nemours & Co. have approved plans for a $1,500,000 sulfuric acid plant near *Richmond, Va.* . . . St. Josephs Hospital, *Atlanta, Ga.*, is planning a $1,500,000 expansion.

Housing—Work is about to start on a $4,000,000 subdivision of 400 homes at *Birmingham, Ala.* . . . Construction is starting on 150 apartments in the Villeray district of *Montreal, Que.* . . . A $25,000,000 project—construction of 2,000 houses as a new community—has started six miles west of the center of *Portland, Ore.* . . . Plans have been announced for 200 homes to cost $2,000,000 at *Greenville, S. C.* . . . A corporation affiliated with the International Business Machines Corp. plans early construction of over half a million dollars worth of new houses for returned veterans employed by I.B.M. at *Endicott, N. Y.* . . . Oklahoma University, *Norman, Okla.*, will build a 96-family housing project to cost $275,000. . . . The *Illinois* state housing board is studying plans to use its $10,000,000 slum clearance funds to buy tax-delinquent property and sell it for the immediate erection of homes. . . . FHA has announced that western *Pennsylvania's* goal in the veterans' emergency housing program is 18,050 homes by the end of 1946.

James L. Pease of *Cincinnati, Ohio*, has been appointed director of the prefabrication production branch of the National Housing Agency.

Highways—*South Carolina's* state highway system will be enlarged 12 per cent. to 15,412 miles, July 1 by the addition of 1,645 miles of county roads. . . . *Kentucky's* highway department has awarded $6,043,521 in road contracts since last Jan. 1. . . . Bids are being received this week for a 6-mile grading project to start a 4-lane $10,000,000 super-highway in southern *Minnesota*. . . . *Syracuse, N. Y.*, has received a bid of $99,828 for repaving a section of Hiawatha Boulevard—$5,000 less than estimated by City Engineer Nelson A. Pitts. . . . The awarding of a new $574,446 contract for work on 13 miles of the Nogales-Tombstone highway brought to $3,234,446 the amount of road construction and improvements projects awarded since *Arizona* revived roadbuilding last November. . . . Governor Gregg Cherry of *North Carolina* has announced that he is making $5,000,000 available for the betterment of county roads above budget appropriations made by the legislature. The money will come from the state highway fund under a provision of the 1945 appropriations act. . . . Work has started on the retreatment (oiling) of 4,007 miles of roads in *Pennsylvania*. . . . The *Kentucky* highway department has awarded a total of $6,043,521 in contracts this year.

Sewerage and Waterworks—A proposed disposal system at *Napa, Calif.*, will cost about $1,195,000. . . . A disposal plant at *Eugene, Ore.*, may cost over $250,000. Now available is $154,000 out of a fund accumulated from a 25-cent monthly surcharge on water bills. . . . *Cleveland, Ohio*, has authorized a $250,000 engineering fee for the department of public utilities to prepare contract drawings for a new Lake Erie water intake and water mains to cost about $8,300,000.

Bond Issues—On May 28 *San Antonio, Tex.*, will vote on a $4,400,000 bond issue for sewage treatment plant work, storm sewers, sewer mains and laterals. . . . Voters of *La Grande, Ore.*, May 17 will vote on a 5-mill school tax level to raise $440,000 in 10 years. . . . *Forest Grove, Ore.*, May 29 will vote on a $400,000 issue for a sewage treatment plant and a $300,000 reservoir. . . . *Charlotte, N. C.*, voters have approved a $10,447,000 bond issue for municipal improvements—sewers, water works, streets and schools. . . . *Santa Ana, Calif.*, has approved $1,500,000 for improvements, and Sanitation Districts 16 and 17 in *Los Angeles County* have voted a $2,186,000 bond issue for a sewer system in parts of *Pasadena, San Marino, Alhambra*, and *South Pasadena*.

Chain of Rocks canal to be started this year

Construction of the proposed $14 million lateral canal to bypass the troublesome Chain of Rocks section of the Mississippi River just south of the mouth of the Missouri River near the northern edge of St. Louis will be started this summer and take about three years to complete, Col. Clark Kittrell, division engineer for the War Department's Upper Mississippi Valley division, said in an address before the St. Louis Section of the American Society of Civil Engineers which he delivered in St. Louis on April 22.

Preliminary work on the canal, which is to be 8 miles long, two miles shorter than the present trip by the river, is to be started following the passage of a $2,500,000 appropriation now being considered by the House of Representatives at Washington. The relocation of the eastern approach of U. S. Highway No. 66 to the Chain of Rock Bridge across the Mississippi River, construction of a 17-span steel bridge over the canal site and relocation of several utility pipe lines, including the 54-inch water intake line of the East St. Louis & Interurban Water Co., which serves East St. Louis, Bellville and several adjacent communities.

The main lock of the canal, 1200 ft. long and 110 ft. wide, will be the largest on the Mississippi, Illinois and Ohio rivers, and will afford, in a single lockage, passage for the largest tows now navigating the Mississippi. An auxiliary lock, similar to other standard locks along the river, is to be 600 by 110 ft. and is to handle supplementary and emergency traffic.

Colonel Kittrell explained that the large size of the main canal lock is necessary because, at present, more than 25 per cent of the tows using the river require locks of greater length than the standard locks and the present trend is toward tows carrying in the neighborhood of 16,000 tons of cargo.

Colonel Kittrell said that experiments conducted in the hydraulic laboratory of Iowa University with a working model of the proposed locks have solved the problem of ice disposal in the large canal by the perfection of a double-leaf vertical-lift gate to be inserted at the upper end of the canal lock. This special type of gate would permit the free passage of ice floes to a depth of 10 ft.

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Bids received on several flood control and irrigation projects for early start

Bull Shoals, Blue Mountain, Clearwater work, halted by war, to resume—Other big jobs will be ready soon

Low bids aggregating $5,382,000 were received in March by the Little Rock, Ark. District, U. S. Army Engineers, involving five contracts for dam construction. Three of the contracts cover preliminary work for the Bull Shoals Dam on White River near Cotter, Ark. The other two contracts provide for resuming the construction of Clearwater Dam on the Black River near Piedmont, Mo., and Blue Mountain Dam located on Petit Jean River near Boonville, Ark.

Large storage at Bull Shoals

Bull Shoals Dam—a $47,000,000 project—has been designed as a combination flood control and hydro-electric power project. It will be a gravity type concrete structure with a crest length of 2,349 ft. and a height above streambed of 263 ft. When completed, the dam will permit the storage of three times as much water as that impounded by Norfork Dam located on North Fork River near Mountain Home, Ark. (*ENR*, Feb. 10, 1944, vol. p. 187). Bids on the dam structure itself will be taken June 29.

Preliminary work at the Bull Shoals Dam site is getting under way. Ottinger Brothers of Oklahoma City have started grading for the access highway to the site. Frazier Construction Co. of Fort Smith, Ark., has begun work on an $84,000 office building to be occupied by U. S. Army Engineers, and offices have been set up by the William A. Smith Construction Co. of Houston, Tex., contractor for the railroad to the site.

Blue Mountain, Clearwater dams

A contract was awarded on Mar. 25 to S. E. Evans of Fort Smith, Ark., on his low bid of $1,010,400 for construction of the concrete spillway and additional embankment for the Blue Mountain Dam. Construction of this flood control project, estimated to cost $4,950,000, was suspended in 1942 when the dam was 69 percent finished. When completed, Blue Mountain Dam will be a rolled-fill type structure. 2,800 ft. long and 115 ft. above streambed.

The largest project on which bids were received was for construction of the concrete spillway and additional embankment for the Clearwater Dam. A low bid of $3,415,000 was submitted for this work by Mittry Brothers Construction Co., Los Angeles, Calif.

Construction of Clearwater Dam was stopped in 1942. This rolled-fill, flood control dam will be 4,225 ft. long and 145 ft. high. The entire project has been estimated to cost $11,000,000.

Little Rock flood protection

Bids also are expected to be taken soon on two flood control projects in the Little Rock District. One includes 7.2 miles of additional levee, 4,800 ft. of diversion channel on Fourche Creek, and two floodwater pumping stations, all in the vicinity of Little Rock. This project, which is designed to protect urban property and the municipal airport is estimated to cost $900,000.

The other flood-control project, located near Fort Smith, Ark., on the Arkansas River, will cost in the neighborhood of $1,000,000.

Although no date has been scheduled for taking bids, an additional 35,000 kw. electric generating unit is expected to be installed soon at Norfork Dam.

An interim flood control project for the Red River and its lateral navigation canal from Shreveport, La., to the Mississippi River, has been approved by the valley states, according to the Red River Valley Improvement Association.

Sen. John H. Overton of Louisiana has announced that with the endorsement of the four states, the $42,000,000 canal project will be ready for inclusion in a proposed omnibus rivers and harbors bill.

Other flood-control plans

Ground was broken April 22 for a $5,000,000 Delaware, Ohio, flood control dam that will back up the Olentangy River and form a 16-mile lake in Delaware, Morrow and Marion counties. It is expected to reduce flood crests on the Scioto River at Chillicothe and Portsmouth and below Portsmouth.

The first postwar step toward construction of the 7-dam-flood-control program in the Willamette basin of Oregon was taken when the Portland district Army Engineers called for bids, to be opened May 14, on a $1,000,000 project preparatory to construction of the $6,000,000 Dorena Dam, work on which was stopped by the war.

(*Continued on page* 15)

Additional Army Engineer Construction

Supplementing the table published on page 11 of *Engineering News-Record* for April 25, following are some additional, smaller-sized projects for civil works construction and planning by the U. S. Army Engineers:

General Flood Control

Holyoke, Mass.	$763,000
Holyoke (Springdale section)	344,000
Tully Reservoir, Mass.	659,000
Syracuse, N. Y.	900,000
Elmira, N. Y.	540,000
Sunbury, Pa.	900,000
Youghiogheny Reservoir, Pa.	619,200
Punxsutawney, Pa.	956,000
East Branch, Clarion River Reservoir, Pa.	500,000
Shereveport, La.	900,000
Pineville, La.	128,300
Alohi Rigolette area, La.	500,000
Holbrook, Ariz.	243,000
Colorado Springs, Colo.	475,000
No. Little Rock, Ark.	150,000
Augusta to Clarendon, Ark.	500,000
Van Buren, Ark.	301,000
Crawford Co. Levee Dist., Ark.	400,000
McLean Bottom Levee Dist. No. 3, Ark.	204,200
Dardanelle, Ark.	203,300
Conway Co. Levee Dist. No. 6, Ark	360,700
Conway Co., Levee Dists. 1, 2, 8, Ark.	400,000
Poland Drainage Dist., Ark.	331,300
Little Rock to Pine Bluff, Ark.	450,000
Hords Creek Reservoir, Tex.	500,000
Jenks, Okla.	249,500
Hutchinson, Kan.	800,000
Baldhill Reservoir, N. D.	300,000
Heise-Roberts area, Snake River, Ida.	250,000
Mo. River, Kenslers Bend and Sioux City	360,000
Council Bluffs, Iowa	500,000
Mounds and Mound City, Ill.	700,000
Stringtown, Ft. Chartre, Ivy Landing, Ill.	392,200
Wood River Levee, Ill.	400,000
Harrisonville, Ivy Landing Drainage Dist., Ill.	426,000
Farm Creek Reservoir, Ill.	600,000
Coal Creek Drainage Dist., Ill.	365,400
Cannelton, Ind.	500,000
Newport, Ky.	800,000
Dewey Reservoir, Ky.	510,000
Parkersburg, W. Va.	500,000
Sutton, W. Va.	750,000
Elkins, W. Va.	552,900
Omaha, Neb.	800,000
San Gabriel River, Calif.	650,000
Willamette River, Ore.	450,000
Tacoma, Wash.	807,600
Big Sunflower, Little Sunflower, etc., Miss.	500,000
Oahe Reservoir, S. D.	700,000

Rivers and Harbor Work

Guadalupe River, Tex.	157,000
Illinois Waterway	160,000
Kanawha River, W. Va.	554,200
Columbia River bet. Vancouver, Bonneville, Ore.	239,000
Columbia River at Bonneville	805,800
Snake River, Ore., Wash., and Ida.	500,000
New Haven, Conn.	500,000
Winyah Bay, S. C.	630,000
Canaveral, Fla.	830,500
St. Johns River, Fla.	800,000
Lake Worth Inlet, Fla.	711,000
Tampa, Fla.	219,400
Mobile Harbor, Ala.	475,000
Wolf River, Memphis harbor, Tenn.	100,000
Wrangell Narrows, Alaska	500,000
Alabama and Coosa rivers, Ga. & Fla.	316,000
Mississippi River, bet. Mo. River and Minneapolis	289,000
Ohio River—open channel work	526,000

Navy's Civil Engineer Corps Reorganizes for Peace

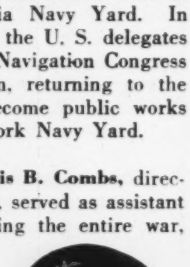
Adm. Jelley

Adm. Smith

Rear Admiral Joseph J. Jelley, assistant chief of the Bureau of Yards and Docks, recently returned from duty as executive officer with the Fifth Naval Construction Brigade at Guam. From 1942 until he went to the Pacific he served as assistant director of the Bureau's construction department in Washington. An Annapolis graduate in 1927, he took civil engineering work at Cornell University and Rensselaer. Born in 1904, he is the youngest rear admiral on active duty in the Navy.

Rear Admiral William H. Smith, chief planning officer and director of the planning and design department, was commissioned in the Civil Engineer Corps in 1917, and served during World War I as public works officer at the Norfolk Yard. Subsequently, he completed tours at Hampton Roads, Va., the Panama Canal Zone, the 11th Naval District and the Philadelphia Navy Yard. In 1935, he was one of the U. S. delegates to the International Navigation Congress in Brussels, Belgium, returning to the U. S. in 1937 to become public works officer at the New York Navy Yard.

Rear Admiral Lewis B. Combs, director, Atlantic Division, served as assistant chief of bureau during the entire war, with supervision over all naval shore construction in the U. S. and at advance bases. He was named to the post in 1938, and held it until transferred to his present duty in February of this year. A Rensselaer graduate, he was commissioned in the Navy in 1917. From 1919 to 1924, he was assistant to the engineer in chief, Republic of Haiti, and then returned to regular Naval duties in many shore establishments throughout the United States.

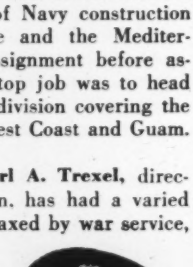


Adm. Combs

Rear Admiral John J. Manning, CEC, USN, took over direction of the Bureau of Yards and Docks last December to begin the job of converting to a permanent establishment the sprawling facilities built during the war. Under his direction, work has already started on de-activating temporary bases and installing permanent construction at key points. A $70,000,000 program of berthing facilities for the 16th (inactive) Fleet is under way.

A 1915 Rensselaer graduate, Admiral Manning entered the Navy Civil Engineer Corps in 1918. From 1937 to 1941, he was head of the fleet facilities division of the Bureau. When war broke out, he was made director of the construction division, which he headed until June, 1945 when he became director of the Atlantic division in charge of Navy construction activities in Europe and the Mediterranean. His last assignment before assuming his present top job was to head the Eastern Pacific division covering the area between our West Coast and Guam.

Rear Admiral Carl A. Trexel, director, Alaskan Division, has had a varied career that was climaxed by war service, which began in the bureau in Washington and included assignment in the logistic plans division in the Office of the Chief of Naval Operations. In this capacity, he attended the Quebec and Cairo conferences of the late PresidentRoosevelt and former Prime Minister Churchill. He was commissioned in 1917, and his service has included the post of inspector of naval petroleum reserves during the closing down of the Teapot Dome field.



Adm. Trexel

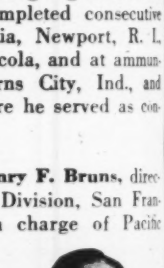
Adm. Marshall

Capt. Short

Rear Admiral Edward L. Marshall, chief inspector, was head of the aviation construction division at the beginning of the national emergency—a post he had held since 1937. With the reorganization of the bureau in 1941, he became director of the finance and operating department, remaining there until his present appointment. A civil engineering graduate of Tufts College, he entered the Navy in 1914. His long service has included tours at most major naval installations.

Captain Wallace B. Short, director, administration and personnel department, assumed his duties last January after having served as officer in charge of the 11th Naval Construction Brigade in the Ryukyus campaign, where he held the temporary rank of Commodore. A 1924 graduate of the Naval Academy, he took his civil engineering degree at Rensselaer, and then completed consecutive tours at Philadelphia, Newport, R. I., Pearl Harbor, Pensacola, and at ammunition depots at Burns City, Ind., and Hastings, Neb., where he served as construction officer.

Rear Admiral Henry F. Bruns, director, Eastern Pacific Division, San Francisco, was officer in charge of Pacific naval air base contracts while serving as public works officer for Pearl Harbor and the 14th Naval District at the start of World War II. Shortly after Dec. 7, 1941, he was transferred to San Diego, Calif., and later became superintending civil engineer for Districts VI, VII, VIII and the Alaskan Division. In 1945 he was director of the Atlantic Division. An Annapolis graduate in 1907, he also served at New York, Guantanamo Bay and Great Lakes.



Adm. Bruns

Commodore William Mack Angas, superintending civil engineer, Areas I and II, with additional duty, Area III, was public works officer at the Charleston, S. C., Navy Yard, at the start of the late war. He was transferred to similar work at the New York Navy Yard in 1942, and in early 1944 became officer in charge for the Third Naval Construction Brigade in the Philippines campaign. In February, 1945, he was named commander of construction forces with the Seventh Fleet. A graduate of M.I.T. in 1917, he was commissioned in the Navy that year, and served at Philadelphia, Pearl Harbor, Boston, New York and Pensacola.

Commo. Angas

Rear Admiral James T. Mathews, superintending civil engineer, Area IV, New Orleans, La., rose to his present assignment after more than 30 years of duty in Naval public works. Having been graduated from the Naval Academy in 1913, he served with the fleet during the first war, and took a civil engineering degree at Rensselaer in 1918. In 1918-1920 he was department engineer of the south for the government of Haiti, and after 1920 he served at Boston Navy Yard, the submarine base at New London, Conn., at Honolulu and at Charleston, S. C.

Adm. Mathews

Rear Admiral Henry George Taylor, superintending civil engineer, Area V, Chicago, took over his present assignment in April, 1942, after having served in a similar capacity in the Twelfth Naval District, San Francisco, since 1938. A Naval Academy graduate in 1908, he served a two-year sea duty tour, and transferred to the Civil Engineer Corps in 1911. In 1914, he was assigned to the Philadelphia Navy Yard for a year, leaving there to report to the Honolulu Naval station.

Adm. Taylor

Commodore Lewis N. Moeller, superintending civil engineer, Area VI, Western Sea Frontier, San Francisco, Calif., was officer in charge of construction at the Naval Air Station, Corpus Christi, Tex., at the start of the national emergency. In August, 1941, he became director of the progress control and statistical departments of the bureau, which post he held until 1945 when he was transferred to his present duty. He is a graduate of Columbia University, and entered the Navy in 1917. His service includes duty at San Diego, Guam, Key West, Mare Island, Pearl Harbor, the Naval Air Station at Pensacola and the Philadelphia Navy Yard.

Commo. Moeller

Captain A. C. Eberhard, director of progress control and statistical departments, returned to the Navy in 1940 after 20 years of varied private construction work. He was first assigned as assistant officer in charge of construction at the Naval Air Station at Corpus Christi, and in 1942 transferred to the Bureau in Washington to head the surplus materials and equipment division. A graduate civil engineer from Lehigh University in 1916, he was commissioned in the CEC in 1917, and served until 1920, when he resigned to enter private practice.

Capt. Eberhard

Captain John J. Chew, director, finance and operating department, came to that department as assistant director in December, 1941, and was elevated to his present position in 1945. A graduate of Cornell University in 1915, he was commissioned in the CEC in 1921, and assigned to the Philadelphia Navy Yard, where he remained until 1925, when he was transferred to the Navy Yard, Charleston, S. C., as assistant public works officer. He later served as public works officer at Tutuila, Samoa.

Capt. Chew

Captain John C. Gebhard, design manager, served in the U. S. Army during the first World War, and then was commissioned in the CEC in 1921. A graduate of Cornell University, he served at New York, the Virgin Islands, Puget Sound, Newport Naval Station and in the Philippines before the last war. During the war, his assignments included that of head of the Bureau's Fleet and Industrial Facilities Division; officer in charge of construction at the Naval Training Station at Sampson, N. Y.; public works officer for the Tenth Naval District, Puerto Rico; and public works officer at the Naval Air Training Base, Pensacola, Fla.

Capt. Gebhard

Captain T. A. Hartung, director, construction department, served on both fronts during the past war. He was assistant public works officer at Pearl Harbor on Dec. 7, 1941, and shortly afterwards took over as public works officer and officer in charge of air base contracts. Late in 1944, he served as administrative liaison officer, assigned to the enemy materials branch, SHAEF. A University of Michigan graduate in civil engineering, he was commissioned in the Navy in 1918, and has served at many naval installations at home and abroad.

Capt. Hartung

Captain Beauford W. Fink, civil engineer officer in command, Naval Construction Battalion Center, Port Hueneme, Calif., was public works officer and officer in charge of construction at the Naval Operating Base, Bermuda, when the war broke out. Returning to the U. S. in 1942, he served as assistant director and later as director of the bureau's construction department. In 1943, he was attached to the Staff of Fleet Admiral C. W. Nimitz.

Capt. Fink

N. J. starts soon on "dual-dual" road

The State of New Jersey has approved an accelerated program of modern highway construction to include a parkway system running the entire length of the state and an eight-lane highway to handle traffic in the North Jersey metropolitan area. This latter has been characterized as a "dual-dual highway" by Charles M. Noble, state highway engineer (*ENR* April 25, vol. p. 679).

Governor Edge recently signed the second of two bills providing funds for the two new roads—Routes 4 and 100. The program, to be completed in five years, eventually will cost $125,000,000.

State Highway Commissioner Spencer Miller, Jr., said plans are being rushed to permit start of construction soon.

Designated as a freeway open to all motor vehicles, Route 100 will have eight lanes, with separators dividing it into four 2-lane roads. The two inside two-lane roads will be for through traffic and local traffic will use the outer lanes. There will be no traffic lights, grade intersections, or access roads except at regulated distances. Cost is estimated at "at least" $50,000,000. Route 4 will be limited to passenger car traffic.

Connects with bridge and tunnel

With its 300-ft. right-of-way starting at the George Washington Bridge, Route 100 will follow a new route with new bridges over the Passaic River, paralleling the high level route of the Pennsylvania Railroad, and will afford direct access to the Lincoln Tunnel. The freeway will go through the Linden oil refinery area, Elizabethport and the Newark-Elizabeth meadowland to New Brunswick.

The system provides for two branches in the vicinity of Elizabeth—one, S-100, to connect with Route 25, and the other across Newark Bay to Bayonne. Miller expects to advertise for bids on the first Route 100 work in about 45 days. The 16 miles to Newark are expected to cost more than $20,000,000. Grading will be for eight lanes but only four will be paved at present. In the 5-year period work will be carried up to the Lincoln Tunnel.

Limited to passenger traffic, Route 4 will be free from billboards and commercial establishments and will be "the most elaborate type of road construction ever undertaken in New Jersey." It is planned as part of a north-south parkway that eventually will extend from the New York State line to Cape May, with a branch from Woodbridge to Trenton and Camden.

For the 5-year program, work will be confined to the section of Route 4 between Woodbridge and Clifton at an estimated cost of $30,000,000. Grading will be for six lanes, three in each direction, but plans call for paving only four at present.

Broken lines show routes of New Jersey's proposed new parkway system, Route 4, and new superhighway, Route 100.

The Highway Department has $33,567,828 available for construction and right-of-way for the period ending June 30, 1947. Half of this amount represents Federal funds.

Equal amounts of $8,300,000 each have been set aside for the first links of the parkway and freeway.

Idaho corporations can't be "engineers"

It is a violation of the law for a corporation or company to use the words "engineer," "engineering," "surveyor" or "surveying" in its corporate or company name or in its advertising. Frank Langley, Idaho attorney general, has advised the State Board of Engineering Examiners.

An examination of existing law "leads one to the conclusion that the profession of engineering is of a personal nature and can not be practiced by a corporation," Langley said in response to an inquiry from Raymond J. Briggs, secretary of the board.

Congress completes action on compromise airport bill

The Senate recently approved a compromise Airport Bill (S. 2) which authorizes expenditure of $500 million of federal aid in the next seven years, beginning July 1. In its final form the bill permits the channeling of federal funds directly to municipalities as well as to the states. This is the form in which the distribution of funds was approved April 2 by the House (*ENR* Apr. 11, vol. p. 517). The Senate had voted earlier to channel the money through the states almost exclusively but the compromise—approved by both House and Senate—permits aid direct to local groups.

The money is to be matched on a 50-50 basis by local sponsoring groups, which will result in a total construction program of one billion dollars. Federal expenditures are limited to $100,000,000 during any one year. Also provided in the bill is $3,000,000 for airport planning by the Civil Aeronautics Administration.

Congress fails to agree on housing subsidies

A joint committee has failed to get members of the House and Senate to agree on the amount of subsidies for building materials for housing construction to be included in the Patman Housing Bill (H. R. 4761). When the House passed the measure early in March (*ENR* Mar. 14, vol. p. 377) it knocked out the subsidy assistance entirely, but the Senate before passing the bill late in April (*ENR* Apr. 25, vol. p. 678) included $600,000,000 for subsidies to increase the output of critical and new building materials needed for housing construction.

The two bodies are now unable to agree on what if any aid should be given. The Senate has indicated that it might agree to reduce the subsidy figure to $400,000,000. However, the House remains firm in its decision to provide no subsidies. An agreement may be reached on May 9, when the House as a whole will reconsider the subsidy question.

Both the House and Senate have agreed upon the plan to give Administrator Wyatt of the National Housing Agency broad powers to instruct the Office of Price Administration in what price changes should be made to expedite the production of housing supplies.

Mexico—The Mexican Government has appropriated $40,000,000 for highway construction and maintenance during 1946, with principal attention to be directed to the Inter-American highway.

Jordan Valley project hinges on peace

Cooperation of four small countries necessary if Jordan water is to be utilized for power, irrigation

Cooperation of Lebanon, Syria, and Trans-Jordan is essential to utilization of the Jordan River water for irrigation and power in Palestine. Such is the statement of the joint Anglo-American Committee of Inquiry on the problem of Jews in Europe and Palestine, made public last week. Moreover, the proposed water use can have little or no bearing on the capacity of Palestine to provide an immediate haven of refuge for homeless Jews from Europe.

Some definite preliminary plans for the development have been made. The report states: "The Commission on Palestine Surveys, an American Zionist-financed organization, submitted proposals conceived on bold and imaginative lines and worked out in considerable detail by American engineers of the highest standards for a 'Jordan Valley Authority.' The general design is to bring water from the sources of the Jordan to the fertile Esdraleon plain and the coastal plains, to irrigate the lower Jordan valley and to utilize the water both of the Jordan River and of the Mediterranean Sea for the generation of electric power."

Stage development proposed

The plans were prepared by James B. Hays, chief engineer of the Commission on Palestine Surveys, and formerly with the Tennessee Valley Authority and the Bureau of Reclamation. H. E. Barrekette is assistant to the chief engineer. A distinguished board of consulting engineers collaborated on the plans. Members are John L. Savage, H. W. Bashore, C. E. Blee, Walter C. Lowdermilk and Abel Wolman.

The plan for Palestine is proposed in several stages, each of which is said to stand on its own merits and to be feasible whether the project is carried to its full completion or adopted only in part. These stages may be listed briefly as follows:

(1) Development of underground water resources by pumping, principally along the coast, with a dam on the upper Jordan for power. (2) Utilization of the upper Jordan with a long canal to irrigate the plains of Esdraleon and smaller areas. (3) Utilization of the Yarmuk River with storage in Lake Tiberias for irrigation along the central Jordan. (4) Development of power with water transferred from the Mediterranean Sea to the Dead Sea to replace water taken for irrigation. Under this plan it is planned to lift about 1,060 cfs. of water from the Mediterranean about 130 ft. and let it flow by gravity to the Dead Sea at El. —1296. There would be two power houses on the line, one with a head of 984 ft. and the other with a head of 361 ft., with about 137,500 kw. installed capacity. (5) Storage of winter surplus flow of the Jordan to provide for irrigation of additional lands. (6) Reclamation of a lake and swamp area with pumping to increase the usable land area and provide water for irrigation elsewhere. (7) Utilization of water along the Jordan and some local streams to provide water for irrigation in the Jericho area. (8) Construction of small storage dams on local streams to provide water for further irrigation along the lower coast.

It it believed that the present irrigated area of 100,000 acres in Palestine may be profitably increased to 706,000 of first class land at a capital cost of $192,000,000 or $316 per acre. Cost of developing the hydroelectric power would be in the neighborhood of $50,000,000 and would produce power at about 0.4 cents per kwh.

Staff named to handle utilities for housing

Frank W. Herring has been appointed director of the land and public services branch of the National Housing Agency, which has been established to promote site acquisition and development measures in connection with the emergency housing program. Under his direction Arthur E. Gorman will serve as director of the public services division of the branch and Milton Fischer has been selected as head of the urban development division.

Three divisions have been established within the branch—land, public services and urban development—to aid municipalities in providing desirable home sites and environment. The land division is to facilitate the acquisition of suitable sites at costs in keeping with the rental and price goals of the housing program. The public services division, in cooperation with other agencies, will advise local governments concerning adequate utility and community facilities. The urban development division will establish standards for and evaluate the suitability of sites.

Experienced division heads

Mr. Herring, an editor on *Engineering News-Record* from 1929 to 1935, was successively executive director of the American Public Works Association, an assistant director of the National Resources Planning Board, deputy chairman of the facilities committee of the War Production Board, and a commander in the Navy's Civil Engineer Corps. In the latter role he was in charge of a project that compiled a record of the construction operations of the Seabees.

Arthur E. Gorman, who resigned from the U. S. Public Health Service to accept the public services division post, formerly was in charge of the water utilities division of the War Production Board. Coupled with this public works background on a national scale is his long experience as assistant city engineer of Chicago, where he specialized in water supply and sanitation work.

Mr. Fischer, who is in charge of the urban development division, was recently released from Navy sea duty. He has long been identified with the housing and city planning fields in the division of defense housing coordination, the U. S. Housing Authority (now FPHA) and in various city and county planning departments. He was with the National Housing Agency as regional representative and conducted research projects in urban development before entering the Navy.

No appointment has yet been announced for the land division.

Large aerial survey undertaken in Ontario

The Ontario Department of Lands and Forests has asked bids on a very large aerial survey to map 80 million acres of forest areas in the province, over a 5-year period. Bids have been received from some of the largest aerial survey organizations in Canada, the United States and Great Britain.

Although the Ontario Forestry Department does a certain amount of this work itself, it was decided that the new undertaking was of such magnitude that it should be carried out by contract, leaving the department's own staff free for its regular work. The survey will give the department its base map for timberland operation and supervision.

Indiana schools offer apprentice training

Apprenticeship training courses in carpentry, plumbing and steam-fitting, brick-laying and stone-masonry, painting, decorating and wall-papering are to be offered in cooperation with the public schools of Indianapolis, Ind.

One phase is on-the-job training under the Marion County Residential Builders, Inc.; and another is related technical instruction in evening high school classes.

DEVELOPMENTS BEYOND U. S. BORDERS

Digested from reports by Engineering News-Record correspondents and the McGraw-Hill World News Bureau

Flood control, power production along TVA lines planned in India and Mexico—Ship generator units for installation in Dnieprostroi Dam powerhouse—England reports building material shortage

Two major power-flood-control-navigation schemes paralleling the development of the Tennessee Valley were announced by governments at opposite sides of the world last week, as nations sought to improve their industrial and food producing potentials.

In India, the government of the State of Bengal, in the eastern sector, announced plans for a TVA-like system of dams along the upper Damodar River and its tributaries, west of Calcutta.

Total reservoir capacity to be provided will be about 4,500,000 ac.ft.

As a flood control measure, the dams will provide protection against floods of double the intensity of the worst Damodar floods to date, government engineers said. Hydro-electric power stations to be built would be supplemented by steam plants using western Bengal coal, and the whole system would be capable of producing nearly 300,000 kw.—as much power as is now used by the entire city of Calcutta.

Of equal importance will be provision for year-around irrigation of 750,000 acres of farm land around the Bengalese capital city. A proposed section of the plan would provide for the cutting of a navigation canal between the Damodar and the Hoogly River (on which Calcutta stands) to connect the city with the big coal fields around Raniganj. Construction of the project is expected to take about three years.

The Bengal government also announced it was considering plans to dam the Tista River in its relatively narrow gorge in the Himalayas, and to develop a 600,000-acre irrigation project from the Mor River.

Several states in Western India said they were likewise considering various flood control projects as a part of a general 5-year reconstruction program.

Jaipur State has allocated about $12,000,000 for hydro-power and irrigation works; Johdpur plans to spend $3,000,000 on similar work, and the Udaipur government said it has plans for control of the Chambal and Banas Rivers.

Mexico—Miguel Aleman, candidate for the presidency of Mexico at the July elections, is reported to be at the head of a proposed power and irrigation plan that would develop areas in Sinaloa and Vera Cruz States to provide irrigation water for huge and at present unproductive farm areas.

The areas selected are the valleys of the Fuerte River in Sinaloa, and the Papaloapan River in Vera Cruz. The Fuerte River area, comprising southern Sonora State and northern Sinaloa, designated as the Northwestern Project, is an area traversed by some 13 heavy-flow rivers, and the land to be brought under irrigation is said to be highly fertile and well located for trade. In Sinaloa, several projects are already under way—notably Sanalona Dam, which is being built to help the production of sugar in the country. The new projects would bring under irrigation more than 600,000 acres in the area. Both projects would include construction of systems of irrigation ditches.

The government of Bengal, India, plans TVA-like programs to harness waters of the Damodar, Mor and Tista Rivers for irrigation and power purposes.

Power . . . .

Russia—Major parts of the first of three 90,000-kva. hydro-electric generators for Dnieprostroi Dam (*ENR* Feb. 7, vol. p. 203) are being shipped here by the General Electric Co. of Schenectady, N. Y.

With frame diameter of 42 ft. 5 in., and a weight of more than 1,000 tons, the new generators are said to be the largest in physical size ever built. These units have an increased rating of 16 percent over the 77,500 kva. machines built by the same company in 1931 for the same project. The generators for Boulder Dam, are rated at 82,500 kva.

Reconstruction of the Dnieprostroi Dam—first completed in 1932 at a cost of $110,000,000, is one of Russia's foremost postwar projects, since the dam is the principal source of electric power to large industries in the southern Ukraine. Although in 1941 the Germans reported that the Russians had voluntarily destroyed the dam, recent investigations have disclosed that Soviet engineers had only short-circuited the generators and removed vital equipment. Actual demolition was carried out by the Germans as they retreated from the area.

Reconstruction . . . .

England—The latest and most serious threat to Britain's housing program is a famine of building materials which must be speedily overcome.

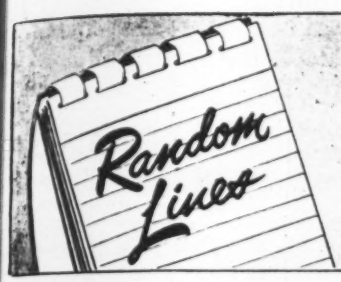
Yearly housing construction goals have been set in England, much as they have been in the United States. Immediate requirements for families without their own homes are at least 1,000,000 units.

To date, hardly a dent has been made in this demand. By the end of February, 1946, only 4,262 permanent houses and 16,718 temporary prefabricated homes had been completed in England, Scotland and Wales. At the same time, about 150,000 temporary and permanent structures were either under construction or ready to start.

Reasons for the poor showing, British authorities said, are two-fold: A critical shortage of construction manpower (only 447,000 at present as compared to more than 750,000 prewar), and shortage of building materials.

At the moment, the shortage of bricks is the most serious bottleneck. During the war about a third of the brickworks were closed, and while licenses to reopen have been approved for most of these plants, February brick production was only 142 million, as compared to the 1938 monthly average of more than 618 million. Timber is also critically short, as are roof slate, cement, asbestos cement sheets, foundry iron, glass and paint.

Low wages in the building materials industry are blamed in part for this shortage.



FROM AN EDITOR'S NOTEBOOK

New AWWA president has been a member of bureau he now heads for 27 years—a man of many talents and titles.

Wendell Richard LaDue, who this week took office as president of the American Water Works Association, is a man of many talents.

Under his mouth-filling title of "Superintendent and Chief Engineer of the Bureau of Water and Sewerage of the City of Akron, Ohio," he is the active operating head of one of the city's largest departments. Under his direction—in addition to the routine of operation—are such varied matters as farming, licensing trappers and fishermen, sheep-raising, and the production of maple sugar from the city's "sugar bush."

The lengthy title, incidentally, even leaves its possessor breathless. He reduces it to "Manager". His employees, also unawed by the collection of names, reduce the title even further—to "Chief."

Born at Mount Pleasant, Ohio, Oct. 1, 1894, he matriculated at the University of Southern California, from which he received a bachelor's degree in civil engineering on Aug. 3, 1919. In his senior year, he was drafted by the Navy as a civil engineer and water expert. He returned to Akron in January, 1919, as a junior water department engineer and the following July was promoted to assistant engineer. He was named assistant designing engineer in July, 1920—the title he held until April, 1922, when he was put in direct charge for the bureau of water supply of the design, preparation of plans, specifications and estimate of cost and the supervision of construction involved in the expansion of the distribution system.

In 1933, he became superintendent and, in April, 1942, the title of engineer was changed to chief engineer.

In 1942, when the city's sewerage department was amalgamated with the water bureau, Mr. LaDue was given supervision of sewers.

Not a bed of roses

His tenure hasn't all been smooth sailing—not with changes in administration such as are fairly common in a political hot-bed like Akron.

A few years ago Mr. LaDue flatly refused the "orders" of a minor political boss to fire 68 of his experienced employees in order to make room on the payroll for the "politically deserving." When it was hinted that unless he complied with the request, his own resignation would be asked, Mr. LaDue carried the fight into the open, scornfully publicized the orders he had been given, and had the pleasure of seeing the newly-elected mayor and his cohorts retreat ignominiously amid confused alibis.

In October, 1942, the "Chief" didn't hesitate to take Akron's City Council to task when he felt discrimination was being shown by the council's members in

the matter of pay increases to the employees of the water department. In fact, the city fathers were caught so far off first base that the entire pay matter was revised so that water department employees also came in for an increase.

Again in 1945 Mr. LaDue led a successful fight against the extension of power sought by the Ohio Water Supply Board. He said he would not "stand idly by and see the control of Akron's 45-mile-long reservoir and river system placed in the hands of the politicians in Columbus."

Recently he announced the time had arrived for a complete modernization of Akron's waterworks, including pumping, treatment and delivery systems, which would cost about $2,100,000.

Mr. LaDue sees the present pumping system as relegated to minor league standing, if Akron attains the growth expected within the next few years. In 1945, the pumping division delivered about 32 million gallons of water per day, with a peak output of 44 mgd. Under the modernized setup, the pumping plant will have a 45 mgd. output with a peak capacity of 15 percent beyond that figure.

Forester, farmer and radio-man

In addition to running the affairs of the city's water and sewerage department efficiently, Mr. LaDue also finds himself in charge of thousands of acres of forest and farm land. And he has more than an academic interest in the price of apples, peaches and other fruits, since the city also owns a 150-acre producing orchard. Until 1941, the department even operated an unlicensed radio station that had FBI operatives beating the back areas in northern Ohio in search of German spies.

The "station", turned out to be a radio gadget that had been homebuilt and placed at Akron's Lake Rockwell reservoir to send radio signals every hour giving the water stage within the reservoir to a pumping station ten miles away.

Mr. LaDue and his cohorts were proud of the gadget. It saved keeping a man at the reservoir. However, a suspicious listener in Indiana caught the signal, rushed to the FBI with visions of uncovering a nest of spies and the FBI soon had LaDue—the inventor—dismantling it.

He is considered an authority on the geological history of northern Ohio; is a special lecturer for a 12 weeks' course at the University of Akron on "Water Supply and Fire Protection", always holds an important post in the city's Community Chest, and is an active member of the Chamber of Commerce.

A member of the American Society of Civil Engineers, Mr. LaDue is also a past president of the Akron District Society of Professional Engineers.

An active participant in the American Water Works Association, he won the George Warren Fuller award in 1939 and was a national director from 1940 to 1942. Since 1942 he has served on the committee on waterworks practice and the committee on publications and has been chairman of the committee on municipal waterworks organization since 1941. He was named vice-president in June, 1945, and his election as president of the association was confirmed in March of this year.

An invitation LaDue extended a few years ago to the city officials and city council members of Akron has now become something of a tradition in the Rubber City, and at LaDue's expense.

On the basis of past performance, Wendell LaDue can be expected to bring stimulating direction to the affairs of the AWWA in the coming year.

MEN AND JOBS

Arthur H. Benedict, formerly division engineer for Asphalt Institute of America, will establish a consulting engineering office at Los Angeles, Calif. Connected for ten years with the Public Roads Administration, Mr. Benedict later acted as assistant chief engineer on Pan American World Airways' airfield program in Central and South America and Africa.

Freese, Nichols and Turner, consulting engineers, have opened offices in the United Gas Bldg., Houston, Tex.

C. T. Laidlaw, city engineer at Sarnia, Ont., has resigned to take up private practice.

S. A. Erickson, division engineer at Missoula, Mont., for the Northern Pacific Railway, retired recently after 41 years of service. His successor is **Robert B. Rhode,** former assistant engineer in the bridge department.

The Oregon state highway commission has reappointed top administrative officers for 4-year terms. They include: **R. H. Baldock,** engineer; and **C. B. McCullough,** assistant engineer.

Pennsylvania Governor Edward Martin has announced the appointment of **Charles Haydock,** civil engineer, Philadelphia, as a member of the State Registration Board for Professional Engineers, succeeding Carroll R. Thompson, Philadelphia, deceased.

Carl B. Pendergraft, for the last four years associated with the consulting engineering firm of McCrae, Bair & Lefever, Little Rock, Ark., has opened his offices at 303 Gazette Building, Little Rock.

A. O. Wolff, St. John, N. B., who has been district engineer for the Canadian Pacific Railway since 1939, has been transferred to Toronto, as assistant maintenance of way engineer. Succeeding him at St. John is **J. A. MacKenzie,** who has been on the engineering staff of the C. P. at Toronto. **G. W. Miller** has been appointed district engineer, Ontario district, succeeding **T. B. Ballantyne,** named to other duties.

Edward Kean and **Martin W. Wise** have formed Kean-Wise, Inc., a contracting firm in the heavy construction field at Valencia, Pa. Mr. Kean was a contractor before accepting a commission with the Seabees in 1942 and serving with the 53rd Naval Construction Battalion in the Pacific area. Mr. Wise prior to the formation of the new concern, was vice-president and general superintendent of the Harrison Construction Co., Pittsburgh, Pa.

C. H. Jex is engineer in charge of the expanded program of the Grand Junction, Colo., office of the Bureau of Reclamation. **George E. Fowler** will be in charge of a branch field office in the Yampa basin.

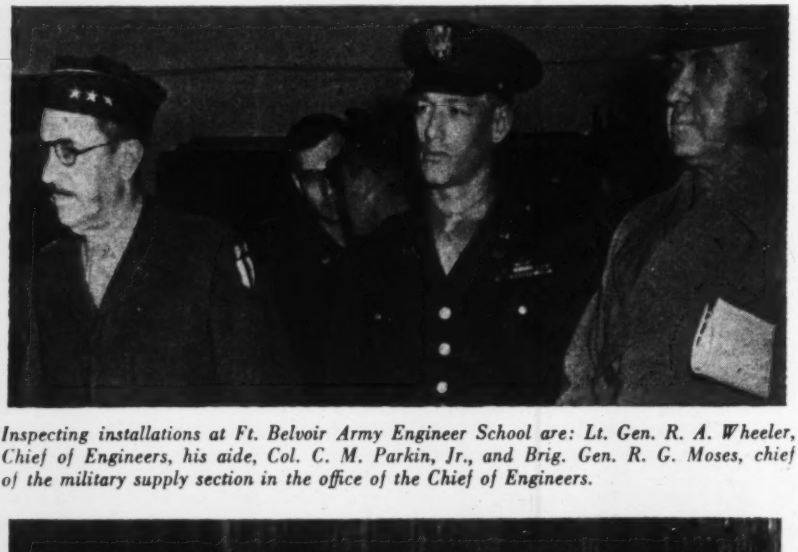
Col. James E. Harper, Jr., recently returned after 45 months as engineer officer for the African-Middle East Theater, has reported to the Mississippi River Commission for duty. A native of Texas and a graduate of Massachusetts Institute of Technology in 1932, Colonel Harper had been a general contractor in San Antonio prior to being commissioned first lieutenant with the Army Engineers in 1941.

C. C. McDonald has been assigned to Tacoma, Wash., as senior hydraulic engineer with the Division of Water Utilization of the U. S. Geological Survey, in connection with the investigational and planning program of the International Columbia River Engineering Board of the International Joint Commission.

M. Ellis Burk, of Arlington, Va., assistant director of the railway transport department of the Office of Defense Transportation, has been named special engineer for the Atlantic Coast Line Railroad at Wilmington, N. C.

A. T. Prunuske, city engineer of Menasha, Wis. for the past 15 years, has resigned to take a similar position at Port Washington, Wis.

Harry O. Carter and **Fred W. Carter**



Inspecting installations at Ft. Belvoir Army Engineer School are: Lt. Gen. R. A. Wheeler, Chief of Engineers, his aide, Col. C. M. Parkin, Jr., and Brig. Gen. R. G. Moses, chief of the military supply section in the office of the Chief of Engineers.

Luncheon meeting of the Dallas Branch, Texas Section, ASCE attracts society leaders. Left to right: Grayson Gill, past president, Texas Section; Oscar H. Koch, Zone 4 director; T. Carr Forrest, Jr., vice president of the state section, and J. C. Bisset, branch president.

of Raleigh, N. C., and **David G. Satterfield** of Clayton, N. C., have formed a general contracting firm at Raleigh to be known as Capital Builders.

Edwin R. Burke of the Ohio state highway department has been appointed deputy engineer of Wood County.

Don Akins, recently named Kittitas County engineer at Ellensburg, Wash., also has been appointed Ellensburg city engineer temporarily.

Sam A. Tomlinson, Jr., has been named construction engineer for the Mississippi State Highway Department, succeeding **E. B. Cavallo,** who resigned.

La Verne A. Hohn, highway commissioner of Dodge County, Wis., for the last 11 years, has resigned to go with the Beaver Grading Co. of Juneau.

Albert Riemenschneider, who has been with the Milwaukee, Wis., city and county parks and public parks division for about 38 years, is retiring to become chief planner on the Fox River Valley project.

T. P. Nelligan has been appointed city engineer and superintendent of waterworks No. 1 of Waukegan, Ill., to replace **Henry B. Bleck,** who resigned after 20 years service.

Warren Henry of Springfield has been appointed chief engineer for the Illinois State Commerce Commission, and **R. B. Thomas,** Springfield, has been appointed assistant chief engineer. **R. F. Allen** of Alton was named safety engineer. Henry, who has been with the commission since 1918, had been acting chief engineer.

Yale C. Moeller, after four years in defense work for the U. S. Government has joined Robinson and Parnham, town planners and engineers at Des Moines, Iowa.

H. E. Widdell has been elected president of Arthur G. McKee & Co., engineers and contractors, Cleveland, Ohio. He succeeds **Arthur G. McKee,** founder, who becomes chairman of the board.

Milo A. Rubek has been appointed highway engineer in Audubon County, Iowa. He formerly was employed for 11 years in the Jones County highway department.

Appointment of **Robert J. Newell,** regional director of the Bureau of Reclamation at Boise, Idaho, as Department of the Interior representative on the recently organized Columbia Basin Inter-Agency Committee has been announced.

Back to Civilian Activity

Benjamin P. McDaniel, lieut. colonel, ATC, is vice president of Associated Engineers, Inc., Fort Wayne, Ind.

Richard G. Thomas, captain, Army Sanitary Corps, has returned to the division of sanitary engineering, Illinois Department of Public Health, Springfield.

Walter S. Johnson, after almost 5 years in the Corps. of Engineers, U. S. Army, has joined the Johnson-Gillanders Co. of Grand Forks, N. D.

William A. Riggs, lieutenant, has been appointed industrial geologist for the Atlantic Coast Line Railroad, at Wilmington, N. C.

John R. Barfield, major, Corps of Engineers, is connected with Milbrandt Construction Co., Inc., Portland, Ore.

C. A. Spaethe, major, has returned to his former position as engineer for Jones County, Iowa, at Anamosa.

Frank M. Stocking, a former chief engineer for the Washington state department of public lands, just out of the service, has been appointed chief right-of-way agent to replace **Earl F. Dickinson,** who resigned to enter private appraising practice in Seattle.

Raymond I. Leland has returned from military service to the Illinois division of sanitary engineering, Illinois Department of Public Health, and is now working on the Chicago-Cook County Health Survey.

J. C. Beall, lieutenant with the U. S. Public Health Service at Macon, Ga., has been appointed engineer of the sanitary division of the city health department at Charlotte, N. C.

William H. Mitchell, lieutenant CEC, USNR, has resumed practice of civil and structural engineering in Boston and Quincy, Mass.

E. P. Wood, lieut. commander, USNR, has been made vice-president of Stevens and Wood, Inc., engineers and constructors, York City.

Benjamin H. Crosland, colonel, former chief engineer of military railway service in the European war theater, has been appointed assistant chief engineer for the St. Louis-San Francisco Railway (Frisco Lines), with headquarters in Springfield, Mo.

R. Paul Cherry, following 2½ years in the sanitary corps of the U. S. Army, has returned to sanitary engineering with the Kansas State Board of Health.

J. E. Dennis, commander in the Seabees, is at Charleston, S. C., supervising repairs to the John P. Grace Memorial bridge for Tidewater Construction Corp.

R. E. McNeil, who served in Germany with the 843d Aviation Engineers, has been re-appointed Ford County, Ill., superintendent of highways.

James O. Banks, lieut. colonel, whose last assignment was as post engineer at Kirtland Field, Albuquerque, N. M., has gone to Jackson, Mich., with the Fargo Engineering Co.

Cecil Kinder, lieut. colonel, Corps of Engineers, is returning to Pomeroy, Wash., to take over the position as Garfield county engineer which he left four years ago to join the armed forces.

John P. Larsen, colonel, Corps of Engineers, has returned to the New York State Department of Public Works, Rochester, N. Y.

H. T. Nelson, construction engineer for the Bureau of Reclamation on the Roza Division of the Yakima Project, devotes himself to necessary paperwork at his desk in the Bureau office at Yakima, Wash.

Back on the job as director of public works for Dallas, Texas, J. G. Rollins has been on leave of absence serving as engineer in charge of preliminary studies and design for the proposed Central Boulevard project.

ENGINEERING SCHOOL NEWS

$1000 S.P.E.E. award for engineering teachers — Schools enlarge facilities — Veterans to learn road building at Rutgers

This year, for the first time, an award of $1,000 will be given to the college or university teacher adjudged to have contributed most to the successful teaching of engineering students, it was announced in New York recently by The Society for the Promotion of Engineering Education.

The prize, to be conferred annually, and known as the George Westinghouse Award in Engineering Education, has been made possible by the Westinghouse Educational Foundation.

In announcing the plan, Harry S. Rogers, president of the society, and also president of the Polytechnic Institute of Brooklyn, made clear that while there are no age limitations for the award, "consideration will be given especially to the younger men who show by their past record evidence of continuing activity as superior teachers."

"The George Westinghouse Award has signal significance as the first of its kind" said Dr. Rogers. "It should inspire young teachers to bring creative ideas to their educational service and provide a means for further improvements."

The Society for the Promotion of Engineering Education is the national organization of engineering teachers and educators. F. L. Bishop, secretary of the S.P.E.E. for the last 32 years, will distribute nomination forms to the deans of the 165 engineering schools of the country. Presentation of the award will take place at the annual dinner on Saturday evening, June 22, in the Jefferson Hotel in St. Louis, Mo., where members of the S.P.E.E. will meet in their annual convention.

Homer L. Dodge, President of Norwich University, Northfield, Vt., is chairman of the committee on award, which includes also Harry S. Rogers, president of the Polytechnic Institute of Brooklyn; H. P. Hammond, dean of the school of engineering at Pennsylvania State College; W. R. Woolrich, dean of the school of engineering of the University of Texas; Prof. R. T. Birge, of the University of California; Prof. W. Otto Birk, of the University of Colorado, Prof. J. W. Cell, of North Carolina State College; Prof. H. P. Croft, of State University of Iowa; Prof. H. E. Dyche, of the University of Pittsburgh; and C. A. Powel, of the Westinghouse Educational Foundation.

Construction is scheduled to begin early next year on a building for the school of engineering at the University of Portland, Portland, Ore. The work, estimated to cost $300,000, will be undertaken by Ross B. Hammond, Portland contractor. Preliminary sketches now being prepared by Architects Jacobberger, Stanton & Zeller of Portland call for a T-shaped building, three stories high, of reinforced concrete construction, faced with brick. The structure will cover an area 230 by 74 ft.

The building will include laboratories and shops for the civil, mechanical and electrical engineering departments.

The School of Engineering at the University of Wisconsin registered 1,773 students for the spring term, pushing the university's enrollment to 12,450 students, 5,000 of whom are veterans. Six hundred forty of the engineers are new students, 331 are reentered, 764 continued from last semester, and 38 are graduate students. Morton O. Withey, professor of mechanics, and acting dean of the school, said about 100 more are expected to register late for the 16-weeks session.

Under the G.I. Bill of Rights veterans are to have an opportunity to qualify for road construction work through a training period at Rutgers University, New Brunswick, N. J. The engineering aide enrollees must have completed high school. They are to study at Rutgers for three months and do practical work in the field for one month. Their starting pay with the state will be $1,560 a year and by satisfactory work they can gradually advance to $1,800.

Those who seek to be junior engineers must have finished two years of college. They will spend six months at Rutgers and two months in the field. Their salary begins at $1,800, with annual increments of $120 until it reaches $2,500.

George E. Barnes, head of the department of civil engineering and engineering mechanics at Case School of Applied Science, has announced that Oscar Hoffman has been made an associate professor of civil engineering. He is a graduate of the Royal Technical University in Budapest and holds a doctor's degree from the Royal Technical University in Milan. His previous experience includes work as stress analyst with the Cleveland Pneumatic Tool Co. and Designers for Industry, Inc., and as a structural engineer with the H. K. Ferguson Co. and the Haussman Steel Co.

Appointed assistant professor of structural engineering at Case is John B. Scalzi, who is a graduate of Worcester Polytechnic Institute and has done graduate work at Massachusetts Institute of Technology.

C. D. Williams, acting head professor of civil engineering at the University of Florida has announced the appointment of L. J. Ritter as assistant professor of highway engineering in the civil engineering department. Professor Ritter took over his duties in charge of soil mechanics and the highway courses on March 20. He came from the Texas A. and M. College and was graduated from Colorado A. and M. College and did his master's work at Texas A. and M. College. He has done research work in connection with soil stabilization with the use of bituminous materials and will continue his research activities at the University of Florida.

The department of civil engineering, University of Illinois, will give special courses during the summer session to a group of 15 graduates of the United States Military Academy, West Point. These students will be quartered at Chanute Field, 15 miles north of the campus.

Ira M. Beattie, who was employed by the Canadian Bridge Co., at Walkerville, Ont., recently was appointed assistant professor of civil engineering at the University of New Brunswick, Fredericton.

The trustees of the Massachusetts State College, Amherst, Mass., have approved the establishment of a department of civil engineering within the Division of Engineering. George A. Marston, recently released as a lieutenant in the Navy after 28 months, 12 of which were spent in Newfoundland as officer-in-charge of the Anti-submarine Training Unit at Argentia, has been made chairman of the department.

The physics department of Boston University, which received a 100-miles-per-hour wind tunnel from the B. F. Sturtevant Co., is conducting research in aerodynamics, including experimental verification of theoretical principles.

C. R. Young, dean of the Faculty of Applied Science and Engineering at the University of Toronto, was awarded the honorary degree of Doctor of Science by the University of Montreal at the recent annual banquet of the alumni of l'Ecole Polytechnique, French Canadian engineering school—a part of the university. The degree was bestowed as a symbol of the close relations between Quebec and Ontario educational institutions and as tribute to Mr. Young's forty years of work in engineering education in Canada.

Probe wage violations in Arizona

New Jersey building contractors attempt to end jurisdictional disputes—Strike in clay pipe industry settled with wage increases

A probe of alleged widespread violations of wage ceilings in the Arizona construction industry has been launched by federal agents, at the instigation of the Arizona chapter, Associated General Contractors.

Daniel N. Longaker, Phoenix representative of the wage-hour division of the U. S. Department of Labor, said his findings will be submitted to the National Wage Stabilization Board.

The action is similar to that undertaken recently against Florida builders accused of wage-control violations (*ENR* April 25, vol. p. 673).

The contractors' association recently asked regional offices of the labor department to halt the asserted large-scale wage violations in the Arizona construction field.

"If some government agency," the group said, "doesn't do something about it, the situation soon will reach the stage where no one can build anything. There has been a lot of chiseling going on."

The group charged that these builders are employing "all sorts of undercover dodges and under-the-counter pay-offs," including so-called "bonuses" given upon completion of a job. Another practice, they said, is for these contractors to pay the employee the specified amount due him under the existing wage ceilings by check and the excess amount over and above the maximum in cash, without making any bookkeeping entry of the latter.

Try to stop N. J. disputes

Attempting to find common ground for the settlement of jurisdictional disputes that have tied up millions of dollars of New Jersey construction, particularly in the metropolitan area, the Building Contractors Association of New Jersey held a dinner April 26 for the presidents of state building and construction trades councils. National officers of the international unions, contractors and Princeton University faculty members were on the panel of speakers. Paul L. Troast, Passaic contractor, warned the AFL that "unless it solves the costly matter of jurisdictional disputes immediately, other labor organizations will come forward with a plan which will have the support of the general public, owners and contractors."

He outlined these causes for the current epidemic of work-halting disputes: (1) directions to local unions to recapture work lost during the war; (2) attempts by several trades to enlarge their sphere of jurisdiction; (3) attempts to place contractors on the spot in the assignment of work; (4) refusal to continue work if demands are not met; (5) confusing decisions handed down by national authorities, and (6) refusal of local officials to abide by adverse decisions.

Vincent Morrealli, general counsel of the building laborers union, declared jurisdictional disputes are not labor's problem alone. "Fifty percent of these disputes could be settled by the contractor awarding the work where he knows it belongs."

Clay pipe strike settled

One of the chief bottlenecks in the postwar home construction program now gives promise of being relieved with the final settlement of a 73-day strike which stopped almost 50 percent of the national production of clay pipe. Coupled with strike settlement as a production spur was an OPA announcement permitting a 15 percent increase by manufacturers.

Strikers in 13 companies returned to the presses and kilns on April 22 after agreeing to accept a wage increase of 18½ cents per hour. Labor leaders had asked for a boost of 30 cents while the offer by industry heads was for 10 cents per hour.

Increase for Montreal workers

Montreal, Que. building trade workers, estimated to number about 75,000, have been granted a six-cent-an-hour wage increase by the Regional War Labor Board, a spokesman for the board reported. The ruling applies to all trades except that of bricklayer and will represent an hourly added spending of approximately $4,500 for local employers.

Bricklayers will get a wage boost of 10 cents an hour.

Col. Feringa director of civil works, O.C.E.

Lt. Gen. Raymond A. Wheeler, Chief of Engineers, has named Col. Peter A. Feringa as director of civil works, Office of the Chief of Engineers. Colonel Feringa succeeds Col. James H. Stratton, who has been assigned to duty with the Governor of the Panama Canal Zone, where he will have charge of new studies of the canal.

Colonel Feringa, a graduate of Lehigh University, served in the European thea-

Col. P. A. Feringa

tre under Maj. Gen. Cecil R. Moore, chief engineer. He was in charge of redeployment in Europe. Returning to the United States, he succeeded Col. Xenophen H. Price as resident member of the Board of Engineers for Rivers and Harbors where he served until assigned to his present position. As director of civil works, Colonel Feringa will have direct charge of the Army Engineers' vast program of rivers and harbors and flood control improvements.

Col. Wayne S. Mo re, who served in the Pacific theater, succeeds Colonel Feringa.

Wire mesh is available for 1946 road programs

At a meeting of the Wire Reinforcement Institute at Hot Springs, Va., on April 24, a survey of the welded wire fabric industry revealed the fact that, despite the scarcity of steel, there will be an adequate supply of road mesh to take care of the highway program this year.

New by-laws were adopted by the institute and it also decided to incorporate.

J. C. Shepherd, executive vice-president of the Sheffield Steel Corp., was elected president of the institute to succeed Ford P. Schusler of the Keystone Steel & Wire Co. W. H. Stewart, sales manager of the reinforcing products division of Truscon Steel Co., was elected vice-president to succeed G. L. Crawford of the Wickwire Spencer Division of the Colorado Fuel & Iron Corp. T. J. Kauer, managing director of the institute was re-elected secretary and treasurer.

Calendar of Meetings

NATIONAL

International City Managers' Association, annual meeting, Montreal, Canada, June 16-21.

Society for the Promotion of Engineering Education, annual convention, Jefferson Hotel, St. Louis, Mo., June 22.

American Society for Testing Materials, 49th annual meeting, Hotel Statler, Buffalo, N. Y., June 24-28.

Society for Experimental Stress Analysis, spring meeting, Hotel Statler, Buffalo, N. Y., June 24-26.

Associated General Contractors of America, Washington, D. C., Spring governing and advisory board meeting, Shirley-Savoy hotel, Denver, Colo., June 29-July 2.

REGIONAL

Illinois-Indiana Section, Society for the Promotion of Engineering Education, University of Illinois, Urbana, Ill., May 11.

Connecticut Traffic Engineering Conference, third meeting, sponsored by Yale Bureau of Highway Traffic and Connecticut Highway Safety Commission, Yale University, New Haven, Conn., May 16.

Maryland-Delaware Water and Sewerage Association, 19th annual conference, Lord Baltimore Hotel, Baltimore, Md., May 16-17.

New England Sewage Works Association, Pickwick Arms Hotel, Greenwich, Conn., May 17.

Pacific Northwest Sewage Works Association, Gearhart Hotel, Gearhart, Ore., May 22.

Pacific Northwest Section, American Water Works Association, Gearhart Hotel, Gearhart, Ore., May 23-24.

New York State Sewage Works Association, spring meeting, Hotel Hamilton, Utica, N. Y., May 24-25.

Third Hydraulics Conference, State University of Iowa, Iowa City, Iowa, June 10-12.

California Sewage Works Association, 1946 convention, Monterey, Calif., June 9-11.

North Carolina Waterworks Operators' Association, annual operators' training school, Chapel Hill, N. C., June 10-15.

Ohio Conference on Sewage Treatment, Mayflower Hotel, Akron, Ohio, June 20-21.

New Jersey Section, American Water Works Association, summer meeting, Little Falls, N. J., June 28.

Plans being prepared for new Seattle wharves

The port of Seattle, Wash., is preparing preliminary plans for the construction of nearly a mile of modern shipping terminals on its waterfront, replacing obsolete piers.

Action by the state legislature may be necessary in the raising of funds, while federal aid also will be sought.

Creosote imports needed to relieve shortage

Resumption of normal creosote exports to the United States now being withheld by England would help to relieve the acute shortage which has caused partial shutdown of wood preserving plants in this country, according to a suggestion made by J. F. Linthicum, president of the American Lumber & Treating Co., to John D. Small, CPA administrator, in a letter released during the recent annual meeting of the American Wood Preservers' Association in Cincinnati, Ohio.

R. H. Rawson

"With the termination of hostilities, it was anticipated that England would resume the exportation of creosote, but to date export licenses have been unobtainable," the latter declared.

In the 10 years prior to Lend-Lease (March, 1941), imports supplied 27.7 percent of our total consumption, Linthicum said, with most of the imports coming from England. After Lend-Lease, his letter pointed out, England abruptly curtailed creosote exports. He asserted that the economic balance in England's favor by exporting creosote and importing fuel oil, utilizing the same tankers, is more than two to one.

In view of the anomalous condition, the letter charged that "England is fully aware of the important part creosote plays in our domestic economy and of its own strategic position, so the problem becomes one for our State Department to solve."

R. H. Rawson, consulting timber engineer, Portland, Ore., was elected president of the association, succeeding J. H. Bremicker, Philadelphia.

JOBS OF THE WEEK

ALLATOONA DAM, Georgia

National Constructors, Inc., Columbus, Ga., has been awarded a contract to build the Allatoona Dam by U. S. Engineers, Mobile, Ala. The bid accepted was at $13,282,088.

DWELLINGS, Beaverton, Ore.

Equitable Savings & Loan Association, Portland, Ore., will construct dwellings to cost about $25,000,000. Construction contract has been awarded to Home Construction Co., (associated with Ross B. Hammond Co.) Portland, Ore. U. Ernest Nelson, Portland, Ore., is the architect.

RESIDENCES, Seattle, Wash.

Lew Hykes Construction Co., Seattle, Wash., will construct residences by day labor. The estimated cost is $2,350,000. W. S. Kelton, Seattle, Wash., is the engineer.

MANUFACTURING PLANT, Macon, Ga.

Beers Construction Co., Atlanta, Ga., will construct a manufacturing plant for Armstrong Cork Co., Lancaster, Pa. The estimated cost is $4,000,000.

FALL RIVER PROJECT, Kansas

U. S. Engineer, Tulsa, Okla., awarded a contract for Fall River Dam flood control project to Arcole Midwest Corp., Chicago, Ill., at $6,107,054.

DEWEY RESERVOIR PROJECT, Kentucky

U. S. Engineers, Huntington, W. Va., awarded a contract for the construction of a dam at Dewey Reservoir project, Johns Creek, to Ryan Construction Corp., Evansville, Ind., at $1,994,214.

HOUSING, Seattle, Wash.

Alderbrook Development Co., Seattle, will construct houses, streets, sewers, and watermains by day labor, to cost $3,000,000. Smith, Carroll & Johanson, Seattle, are the architects. General Engineering Co., Seattle is the engineer.

ROAD, Venezuela

A group of oil companies, including Creole Oil Co., Sinclair, Tex., Petroleum Co. and Standard Oil Co., will construct 200-mile road in states of Anzoategui and Guarico by their own forces. The estimated cost is $9,000,000.

Note—Additional bidding and contract news on many projects large and small, including the above items, appear in the Construction News section beginning on page 16.

OBITUARY

George W. Gardner, 47, a consulting sanitation engineer, died at White Plains, N. Y., May 1. He had served as an engineer for the Navy for three years in installing sanitation and water supply systems in Newfoundland.

William R. Conard, 76, former chairman of the New Jersey Water Supply Commission, who had been a water consultant to Boston and Springfield, Mass., Albany, N. Y., and other eastern cities, died at Burlington, N. J., May 1. During the first world war he was a consulting engineer on the building of the camp at Fort Dix, N. J., and the Bethlehem Steel Corp.'s shell-loading plant at Mays Landing, N. J.

Hayden T. French, 59, engineer and at one time operator of his own construction company in Florida, formerly with the Ohio State Highway Department, and employed on a part-time basis by many of the construction firms in his home city of Akron, Ohio, died there April 28. He was a graduate of Purdue University.

W. F. Dennis, 85, retired civil engineer and resident of the District of Columbia for more than 35 years, died in Washington, May 2. Mr. Dennis retired in 1924 from Rinehart and Dennis, contractors in Charlottesville, Va. He had worked on construction of the Chicago Drainage Canal, the Catskill Aqueduct of the New York City's water supply system, and as assistant superintendent of the Panama Railroad.

Ernest W. Werner, 73, Indianapolis, Ind., engineer and architect, a member of Robush and Hunter for 30 years, died April 26.

Timothy E. Treacy, 85, died April 26 in San Francisco, Calif. In 1894 he started work in the city engineer's office in San Francisco and later opened the firm of Flynn and Treacy, building contractors. That company laid out most of San Francisco's early streets.

Theodore H. Weaver, 41, district manager of the Duke Power Co., Rutherfordton, N. C., died April 25. A graduate of the University of North Carolina School of Engineering in 1926, he was later in charge of the university service plant and water system; later resident engineer of Beaver Dam's water and sewer system in Asheville. He joined the Duke Power Co. as engineer; went to Salisbury, N. C., as assistant-engineer in 1929. In 1943, he was made district manager at Rutherfordton.

Roland E. Hecker, 59, for 24 years a civil engineer and surveyor in Columbus, Ohio, died April 22 in that city.

Paul D. Sullivan, 63, former assistant city engineer and engineering contractor in Cincinnati, Ohio, for 20 years, died April 28. He was a first lieutenant in the Army Engineers' Corps in the first world war.

Glenn B. Ashcraft, 71, senior structural engineer of the California department of public works, died April 25.

Bids received on flood control projects

(*Continued from page 3*)

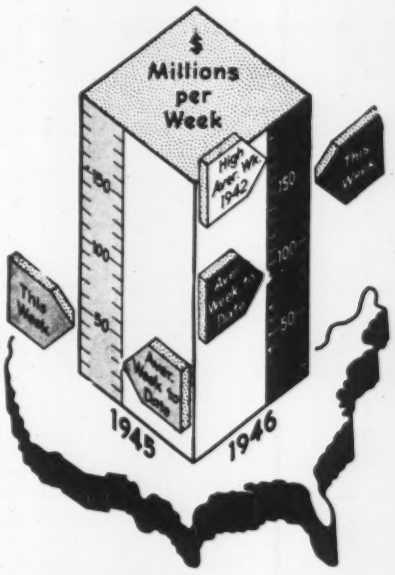
Advance notices to prospective bidders for construction of the Onondaga Creek Dam near Syracuse, N. Y., estimated to cost $1,447,000, have been sent out by Col. J. S. Seybold, district engineer. The dam will be a part of the Oswego River watershed flood control project.

Excavation of a diversion channel to take excess waters of the Colorado River past the $77,000,000 Davis Dam site began April 20. The dam, which will become the fourth link in a $255,000,000 chain that includes Boulder, Parker and Imperial dams, is expected to be completed in four years. It will be 138 ft. high and 1,350 ft. wide and is designed to regulate the flow of the Colorado River below Boulder Dam in compliance with the water treaty with Mexico and to produce power.

A low bid of $1,396,889 has been submitted to the Bureau of Reclamation by Morrison-Knudsen Co., Inc., for construction of Cascade Dam on the north fork of the Payette River in southern Idaho and relocation of 14 miles of a branch of the Union Pacific Railroad. When completed, the project will provide water for 25,000 acres, plus a supplemental supply for 85,000 acres in Emmett Valley. Cascade Dam, 90 ft. high, 660 ft. wide at the base, and 860 ft. long at the crest, will form a reservoir to store 700,000 acre-ft. of water.

Construction is getting under way on the rolled-fill, earth Wister Dam on the Poteau River in eastern Oklahoma. Grooves, Lundin and Cox of Minneapolis, Minn., have the main contract at $4,016,727. Authorized by the Flood Control Act of 1938, the project is included in the comprehensive plan for flood control and other purposes in the Arkansas River Basin. The dam site is two miles south of Wister, Oklahoma and 35 miles southwest of Fort Smith, Ark.

CONSTRUCTION ACTIVITY



As Reported this week to . . .
Engineering News-Record

CONTRACT VOLUME

Continental U. S. Only
(Thousands of Dollars)

	Week of May 9 1946	Cumulative 1946 (19 wks.)	Cumulative 1945 (19 wks.)
Federal	$28,850	$213,475	$344,084
State & Mun.	30,873	400,175	81,099
Total Public	$59,723	$613,650	$425,183
Total Private	77,872	1,149,227	174,889
U. S. Total	$137,595	$1,762,877	$600,072

WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

Type of Work	Dollar Volume (Thousands) This Week	Cumulative 1946 (19 wks.)	Cumulative 1945 (19 wks.)
Waterworks	$3,855	$37,691	$13,319
Sewerage	2,855	23,146	11,014
Bridges	2,391	42,425	10,369
Highways	19,017	223,881	55,990
Earthwork, Waterways	24,835	126,924	13,428
Buildings, Public	3,028	103,769	247,426
Industrial	13,303	365,397	123,496
Commercial	61,600	709,212	29,932
Unclassified	6,711	130,432	95,098

NOTE: Minimum size projects included are: Waterworks and waterway projects, $22,500; other public works, $40,000; industrial buildings, $55,000; other buildings, $205,000.

NEW PRODUCTIVE CAPITAL

	Cumulative 1946 (19 wks.)	Cumulative 1945 (19 wks.)
NON-FEDERAL	$340,565	$235,855
Corporate Securities	134,704	69,213
State and Municipal	205,861	145,742
RFC Loans	.....	20,900
FEDERAL	158,320	233,510
Total Capital	$498,885	$469,365

ENR INDEX NUMBERS

Index Base = 100	1913	1926
Construction Cost	339.69	163.29
Building Cost	257.25	132.06
Volume	349	149

CONSTRUCTION REPORTS

BIDS ASKED — LOW BIDDERS — CONTRACTS AWARDED

Compiled by Business News Department—Engineering News-Record, 330 W. 42nd St., New York 18, N. Y.

ELSIE EAVES, Manager *J. A. MAHONEY, Reports*

(Daily service also available—Write for details)

WATER SUPPLY

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked May 14

O., Toledo—City, City Hall, lining with cement mortar approx. 12,100 ft. 30 in. c.i. watermains Upton Ave.; cleaning 4- to 24-in. c.i. watermains. $70,000. Plans deposit $5. G. Laska, Bureau Engrg., City Waterworks Dpt. J. W. Jewhurst, service dir.

Bids Asked May 16

Ill., Chicago—City, Dpt. P. Wks., City Hall, water supply, sprinkler sys. and sewers, Rainbow Beach. Plans deposit $10.

Bids Asked May 22

N. Y., Oxford—Bureau Contracts & Accounts, Albany, Zone 1, addnl. water supply facilities at Women's Corps Home.

Bids Asked May 24

Fla., Sarasota—City, c/o City Comr., WW imprvs., 1 M.G.D. water and softening plant, brine filters, chlorinating facilities, pipes, etc. Plans deposit $10. Smith & Gillespie, P.O. Box 1048, Jacksonville, engrs. CD 12/19—ENR 12/27.

Bids Asked May 27

Wash., Longview—Cowlitz Co. Pub. Utility Dist. 1, Longview, 76,000 ft., ¾- to 8-in. water distr. sys. and 250,000 gal. concrete reservoir. $100,000. H. L. Gray, 1035 Henry Bldg., 4 and Union Sts., Seattle, Zone 1, engr.

Bids Asked May 28

Okla., Blackwell—City, City Clerk, City Hall, addn., water purification plant enlargement, addn. $115,000. Black & Veatch, 4706 Bway., Kansas City, Mo., engrs. CD 3/19/45—ENR 4/5/45.

LOW BIDDERS

†Calif., Inyokern—Yards & Docks Annex, Navy Dpt., Arlington, Va., Apr. 29, altering water distr. sys. at Naval Ordnace Test Station, Spec. 17564, from Wonderly Constr. Co., 2694 Lime Ave., Long Beach. **$104,716.**

Calif., Oakland—East Bay Municipal Utility Dist., 512 16 St., Apr. 24, c.i. watermains, Alameda and Contra Costa Counties, from Stolte Inc., 8451 San Leandro St., (Sch. 1) **$10,352**; J. Pestana, 16411 E. 14 St., San Leandro, (Sch. 2), **$17,500.**

Calif., San Diego—City, Civic Center Bldg., Apr. 24, lowering Mission Valley pipeline at Balboa freeway crossing, from American Pipe & Constr. Co., 2910 Kurtz St. **$32,205.** H. W. Jorgensen, city engr.

Conn., Hartford—Metropolitan Dist., Water Bureau, Bd. Contr. & Supply, Apr. 29, test borings, Hogback Dam site, Hartland, from Sprague & Henwood, 221 W. Olive St., Scranton, Pa., **$13,050**; pipe fittings, from R. D. Wood & Co., Burlington, N. J., **$60,229.**

Mass., Wenham—Town, Bd. Selectmen, Wenham, standpipe, elevated steel water storage tank, from Pittsburgh-Des Moines Steel Co., 270 Broadway, New York, N. Y. **$31,500.** Bids 4/30. CD 4/23—ENR 4/25.

Ill., Springfield—City, City Hall, Apr. 23, tunnel parallel between Old Lakeside Plant and proposed new one, moving high and low service water lines, from Alzine Constr. Co., 700 N. MacArthur Blvd. **$198,500.** Burns & McDonnell Eng. Co., 107 Linwood Blvd., Kansas City, Mo., engr.

Minn., St. Louis Park—Village, J. Justad, clk., Apr. 22, furnishing, installing 9,480 ft. 6 and 12 in. c.i. water pipe, appurtenances, from Lametti & Lametti, 615 Drake St., St. Paul. **$42,291.** CD 4/8—ENR 4/11.

R. I., Narragansett—State, State House, Providence, rejected bids Apr. 5, water supply, salt water sys. for aquarium, Scarborough Beach. L.B. **$64,000.** Will readvertise. CD 4/10—ENR 4/16.

†S. C., Parris Island—Yards & Docks Annex, Navy Dpt., Arlington, Va., Apr. 22, water supply for fire protection at rifle range, Spec. 17615, from V. P. Loftis Co., Builders Bldg., Charlotte, N. C. **$75,000.** CD 4/9—ENR 4/11.

Tex., Dallas—Dallas Co., c/o Judge, Courthouse, rescinded contract, WW sys. and existing sys. repairs. **$20,000.** CD 4/4—ENR 4/11, under CA.

★**Tex., Galveston**—City, City Hall, project abandoned, 30 in. c.i. watermain between Alta Loma and Galveston Mainland. **$1,200,000.** CD 5/16/45—ENR 5/31/45.

Tex., Grand Prairie—City, G. H. Turner, mayor, City Hall, Apr. 20, drilling, casing, developing water supply well, from J. L. Meyers & Sons, Construction Bldg., Dallas. **$29,395** base bid and **$33,432** alternate bids. CD 4/12.

Wis., Wauwatosa—City, Wm. T. Whipp, clk., City Hall, Apr. 22, well, from S. B. Geiger & Co., 37 W. Van Burn St., Chicago, Ill. **$40,250.** CD 4/10—ENR 4/18.

CONTRACTS AWARDED

Ala., Alexander City—City, water supply sys., to Chastain & Co., Bell Bldg., Montgomery. **$163,000.** CD 4/8—ENR 4/11.

Ark., Little Rock—City, c/o Waterworks Comm., watermain for downtown dist., to Worth James Constr. Co., Pyramid Bldg. **$350,000.** CD 9/26—ENR 10/18.

Conn., Wallingford—Borough of Wallingford, office Burgesses and Wardens, Town Hall, 9,700 ft. watermains, Oak St., to Consolidated Constr. Co., 54 Church St., Hartford. Est. **$24,000.**

Ill., Pontiac—Illinois Water Service Co., Champaign, 500,000 gal. elevated tank, to Chicago Bridge & Iron Co., 332 S. Michigan Ave., Chicago. **$62,500.** CD 11/16/44—ENR 11/30/44.

Ind., Gas City—Bd. P. Wks., R. Ray, chn., imprv. WW, watermains to Niles Excavating Co., Niles, Mich., **$53,697*****elevated steel storage tank, to Pittsburgh-Des Moines Steel Co., 38 S. Dearborn St., Chicago, Ill., **$26,500***** pump, to Layne-Northern Co., Mishawaka, Ind., **$14,900.** Grand total $95,097. C. E. Williams, 312 W. Colfax Ave., South Bend, consult. engr.

Ky., Henderson—City Council, imprv. WW, 4,500,000 gal. reservoir, to Coleman-Trainer Co., Huntington, W. Va. **$133,077.** Est. $200,000. Awarded 4/23. CD 4/8—ENR 4/18.

O., Cincinnati—City, City Hall, rein.-con. reservoir, gate house, grading pipe drain and appurtenances, Contr. 3, to Miller Thompson Co., Muscatine, Ia., **$114,920,** est. $95,000. Bids 3/18; water line, appurteances, Virginia Ave., to Charles F. McCurdy, 160 E. Mitchell Ave., **$52,083.** Bids 3/20. A. LeFeber, 731 Temple Bar Bldg., engr. CD 1/2—ENR 1/17.

★**O., Lima**—City, City Hall, water pump station and pipelines, to Green & Sawyer, Lima and Chas. F. Smith & Sons, 118 Spiral Dr., Dayton, **$545,117.** Awarded 4/25. Jones & Henry, Toledo Trust Bldg., Toledo, engrs.

O., Minster—Village, 250,000 gal., elevated water tank, to Chicago Bridge & Iron Co., 332 S. Michigan Ave., Chicago, Ill. **$33,166.** Finkbeiner, Pettit & Strout, Home Bank Bldg., Toledo, engrs.

S. C., Myrtle Beach—City, O. G. Callaway, mayor, Sect. 1, dist. sys., **$37,600**; Sect. 2, well, pump, 2 pump houses, 3 reservoirs, etc., to M. B. Kahn Constr. Co., 714 Lady St., Columbia, **$26,425.** Bids 4/11. T. M. Jordan, engr.

★**Tex., Wichita Falls**—City, W. B. Hamilton, mayor, City Hall, 5 mi. 39 and 48 ft. water supply line, to Gifford-Hill Co., 412 Texas Bank Bldg., Dallas, and American Pipe & Constr. Co., 4635 Firestone Bldg., Los Angeles, Calif. **$1,449,686.** CD 4/30 under LB.

Wash., Pullman—Washington State College, Pullman, constructing, installing water, sewer and light lines, etc., for 190 housing units and dormitory, to Colonial Constr. Co., P. O. Box 1452, Spokane, **$54,526.** S. A. Smith, c/o owner, archt.

N. S., Halifax—Municipality, concrete reservoir, to Canadian Gunite Co., Ltd., 1465 Peel St., Montreal, Que., **$78,350.** H. W. L. Doane, Pub. Service Com., engr.

N. S., Stellarton — Belmont Co-Operative Housing Corp., watermains, to Tidewater Constr. Co., Ltd., New Glasgow. Est. **$35,000.**

SEWERS, WASTE DISPOSAL

Construction Reports received since this section went to press will be found in Last Minute Construction Reports.

BIDS ASKED

Bids Asked After May 3

Ala., Bessemer—City, c/o J. Bryant, mayor, incinerator, $75,000. J. W. Goodwin Engrg. Co., Martin Bldg., Birmingham, engrs. CD 1/23—ENR 2/7.

Bids Asked May 13

Pa., Phila.—Dpt. P. Wks., City Hall Annex, sewers and core borings, various locations, $100,000. Greeley & Hansen, 6 N. Michigan Ave., Chicago, Ill., consult. engrs.

Bids Asked May 14

S. C., Prosperity—Town, A. R. Hunter, clk. and treas., sanitary sewerage sys. Plans deposit $15. Tomlinson Engrg. Co., 1307 Marion St., Columbia, engrs. CD 1/25—ENR 2/7.

Bids Asked May 20

N. J., Spring Lake—Borough, M. O. Morris, clk., sewage treatment plant addn., altering sewage treatment plant screen and grit removal chamber, sewage treatment plant. Plans deposit $10 each. E. H. Schmieder, engr.

Tex., Decatur—City, C. P. Dodson, mayor, City Hall, sanitary sewerage sys. imprvs., incl. laterals and outfall mains, sewage treatment plant. Plans deposit $25. F. J. Von Zuben, 1606 Mistletoe Blvd., Fort Worth, engrs. CD 9/28—ENR 10/11.

Bids Asked May 21

N. J., Long Beach—Bd. Comrs. Sewerage Dist. 1, Long Beach Twp., Wm. Penn Lodge, clk., sanitary sewers, Contr. B-1. Plans deposit $30. Wm. A. Goff, Broad St., Station Bldg., Phila., Pa., engr.

Bids Asked May 28

Wash., Omak—City, City Hall, 35,000 ft. 8- to 18-in. sewer mains and combined sewage treatment plant and lift station. $175,000. Plans deposit $35. G. D. Hall, Larson Bldg., Yakima, engr. CD 7/12—ENR 7/26.

Bids Asked May 29

Calif., Laguna Beach—City, City Hall, sanitary sewer, outfall and enlargement treatment plant, $231,350. J. R. Lester Boyle, city engr. CD 12/12—ENR 12/27.

Ill., Urbana-Champaign—Bd. Trustees Urbana-Champaign Sanitary Dist. of Champaign Co., in office Administration Bldg., Urbana-Champaign Sanitary Dist., east of the Big Four Shops, Urbana, 114 lin. ft. 42x42 in. monolithic concrete box sewer, etc., Proj. Sect. 1; 10,883 lin. ft. 15- to 30-in. diam. vitr. clay or concrete sewer pipe, etc., Proj. Sect. 2; 6,032 ft. 10- to 18-in. concrete or vitr. clay sewer pipe etc., Proj. Sect. 3, **$250,000.** Plans deposit $20. Wilson & Anderson, 6½ Taylor St., Champaign, consult. engrs.

PROJECTS COVERED

Projects—By Size

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger: water supply, earthwork, waterworks $22,500; other public works $40,000; industrial buildings $55,000; other buildings $205,000.

Classes of Construction

(Name in order of Listing)

Water Supply	Latin America
Sewers, Waste Disposal	Public Buildings
Bridges	Commercial Buildings
Streets & Roads	Industrial Buildings
Earthwork, Waterways	Unclassified

Stages Reported

PROPOSED WORK: Including appointment of engineers or architects.

BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR.;

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

Symbols and Abbreviations Include:

†	Federal Government
★	Project of $500,000 or ove
ENR	Engineering News-Record
CD	Engineering News-Record Construction Daily